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## (Outlook for the Georges Bank Scallop Fishery)



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### (HISTORY OF FISHERY

Georges Bank supports the world's largest scallop fishery. United States boats started extensive commercial fishing on this Bank in the early 1930's and since then there has been a continuous history of good production. After World War II, United States landings increased and since 1955 they have remained in the neighbourhood of 18 million pounds of shucked meats annually.

Canadian boats began scalloping on Georges Bank just after World War II. At that time few boats were equipped for offshore scallop fishing and until 1952 one or two boats made intermittent trips to this Bank. Other areas such as St. Pierre Bank and Port au Port Bay, Newfoundland, were fished by some boats. Since 1952, however, the Canadian offshore scallop fleet has concentrated almost exclusively on Georges Bank and has expanded rapidly. Annual landings have risen steadily and in 1959 reached 4.3 million pounds. So far, 1960 landings have continued this rising trend.

Canadian crews have become much more efficient at scalloping but the primary cause of increased Canadian landings is the build-up of the offshore scallop fleet. From one or two boats prior to 1952, the fleet has increased to 20 boats and indications are that more boats will be constructed. The United States fleet has also expanded and over 70 boats now sail out of New Bedford. The result is that steady, increased pressure has been placed on Georges Bank scallop stocks.

### FLUCTUATING LIMITS

In any natural population, there is a limit to the number of animals that can be caught. This limit is variable, because variable natural conditions regulate reproduction and abundance. For example, in the Digby scallop fishery we have found that great abundance changes are related to water temperature at spawning time. Georges Bank scallop stocks also show great year-to-year changes in success of reproduction. These changes are usually uncontrollable but sometimes they are predictable.

In the past year there has been a great abundance of market-size scallops on Georges Bank. An accurate estimate of their age is difficult but it appears that almost all the scallops now being fished were spawned in the same year—either 1954 or 1955. A few of these were fished in early 1959 but by late 1959 they constituted the bulk of the catch and present large catches depend almost entirely on this single year-class. We do not understand why this one spawning was so successful but with continued research we hope to find the answer. Even if we can't explain the situation, we are able to predict the effects it will have.

### PREDICTED DECLINE IN LANDINGS

Canadian and United States scientists have been sampling the Georges Bank scallop population on both commercial and other beds for several years. Many of the samples have been taken with a small-mesh drag, which captures both market-size scallops and small scallops that must grow for several years before they reach commercial size. Counts of these under-size scallops give a fair idea of what the future holds for the fishery. For instance, we were able to foresee the 1959-60 increase in landings from the tremendous number of scallops just under commercial size which came up in our early 1959 samples.

Our 1960 samples contain very few small scallops. The year-class being fished now is very abundant but the next one or two year-classes appear to be much below normal. This means that undoubtedly catches will decline significantly when this abundant year-class is fished out. From our information it appears that catches will begin to decrease by the end of this year and will remain low for at least two years.

### EFFECTS OF DECLINE

It is difficult to predict the extent and the effect of greatly reduced landings from the fished areas. In most fisheries when production drops in one area the fleet moves to other grounds. The scallop fishery is somewhat different to other fisheries; first, because scallop stocks do not move about like schools of cod and haddock; and second, because no other area has extensive scallop populations like those found on Georges Bank. Furthermore, Georges Bank has been



well explored and it appears to have no areas, fished or unfished, which have extensive quantities of young scallops. It is doubtful if other parts of the Bank can make up for the big drop in catches from regularly fished areas.

Our offshore fleet will probably be unable to turn to other regions to offset reduced catches from Georges Bank. Scallop beds in the Gulf of St. Lawrence are too small and their production too variable from year to year. Surveys of other offshore banks indicate that scallops are too sparse to make fishing commercially attractive for an extensive period of time. The fleet will probably have to be satisfied with the small catches it will be able to take on Georges Bank. Total production from our whole coast as well as from Georges Bank will probably remain low for at least two years.

Reduced catches may encourage some Georges Bank fishermen to shuck many of the small scallops they now throw overboard. This would be a short-sighted policy. In the first place it would require more shucking effort to produce every pound of meat. Secondly, it would probably delay recovery of the stocks of large scallops to more abundant levels.

#### PLANNING ADJUSTMENT

It is hoped that releasing this statement now will aid the offshore scallop fishery to plan for the changes we have predicted. Our research program is continuing and it is planned to make periodic reports to industry on the status of the Georges Bank scallop population.

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